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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,774	09/19/2005	Sang Heup Moon	13156-00018-US	7904
23416	7590	12/27/2007	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ, LLP			MARTINEZ, BRITTANY M	
P O BOX 2207				
WILMINGTON, DE 19899			ART UNIT	PAPER NUMBER
			4116	
			MAIL DATE	DELIVERY MODE
			12/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/549,774	MOON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	BRITTANY M. MARTINEZ	4116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 19 September 2005.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 12-22 is/are pending in the application.  
 4a) Of the above claim(s) 13-22 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 12 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 19 September 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>9/19/2005</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

Citation to the Specification will be in the following format (S. p. #, l. LL) where # denotes the page number and LL denotes the line number. Citation to U. S. Patent literature will be in the format (Inventor, c. #, l. LL) where # is the column number and LL is the line number. Foreign patent literature will be in the format (Inventor, P) where P denotes the paragraph number.

### ***Status of Application***

Applicant's election **with traverse** of Group I (**Claim 12**) in the reply filed on November 30, 2007 is acknowledged. Applicant traverses the restriction requirement on the grounds that examination of the entire instant application would not place a serious burden on the Examiner, and that the common technical feature of the instant (a palladium catalyst consisting of a support and of palladium and lanthanum, of palladium, titanium, and potassium, or of palladium, lanthanum, and silicon) is not disclosed by the prior art. However, the Examiner maintains that the common technical feature of the instant is a palladium catalyst, and this element is taught in the prior art as evidenced by U.S. 5,857,250, KR 2000-0059743, U.S. 4,387,258, U.S. 3,325,556, U.S. 6,413,905 B1, and U.S. 2002/0165092 A1.

Therefore, the restriction requirement is maintained, and made FINAL. **Claims 13-22** are withdrawn from further consideration pursuant to CFR 1.12(b) as being drawn to a nonelected invention. The elected claim (**Claim 12**) has been examined.

***Priority***

1. Applicant's claim for foreign priority in regard to KR 2003/19039, filed March 27, 2003, KR 2003/18891, filed March 26, 2003, KR 2003/18890, filed March 26, 2003, and KR 2003/18888, filed March 26, 2003, is acknowledged. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, certified English translations of the foreign applications must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).

Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

***Specification***

3. The disclosure is objected to because of the following informalities:  
The specification lacks a "Brief Description of the Drawings" section. See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74 should be provided. Further, it appears as if the instant application was not proofread. For example, "To" (S. p. 1, l. 12) should be changed to "Two." Further, it appears as if "(?)" (S. p. 4, l. 28) should be removed.

*Applicant is strongly encouraged to review the entire application for these mistakes, as well as other spelling and grammar errors. Appropriate correction is*

required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

***Abstract***

1. The abstract of the disclosure is objected to because it contains the following informalities: it does not include the proper content, contains spelling and grammar errors, utilizes improper language, and does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Particular errors in the abstract include:

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- “se-selective” (2<sup>nd</sup> line) should be “selective”
- “...to ethylene...” (2<sup>nd</sup> line) should be “...ethylene, ...”
- “consist-ing” (4<sup>th</sup> line) should be “consisting”
- “pre-pared” (5<sup>th</sup> line) should be “prepared”
- “calcina-tion” (7<sup>th</sup> line) should be “calcination”

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 2002/0165092 A1) in view of Meyer et al. (US 6,413,905).

8. With regard to **Claim 12**, Zhang discloses a supported palladium catalyst consisting of 0.002-1.0% by supported catalyst weight of palladium (Zhang, 0017), titania (Zhang, 0016), and 0.05-20% total catalyst weight potassium (Zhang, 0036). Zhang does not specify a titania content range. Meyer teaches a supported palladium catalyst containing 0.01-1.5% by supported catalyst weight of palladium (Meyer, c. 5, l. 17-20) and titanium as a preferable modifier (Meyer, c. 3, l. 1-4) in the amount of 0.1-

10% by supported catalyst weight (Meyer, c. 4, l. 47-49). The palladium, titanium, and potassium contents could have been adjusted by one of ordinary skill in the art to obtain desired catalyst activities. Thus, it would have been obvious to one of ordinary skill in the art to modify the catalyst taught by Zhang with the palladium and titanium contents taught by Meyer in order to obtain a catalyst with increased dispersion of palladium (Meyer, c. 3, l. 27-30), increased activity, and improved ageing stability (Meyer, c. 3, l. 17-23).

### ***Conclusion***

1. No claim is allowed.
2. In general, prior art renders the claimed invention obvious.
3. Applicant is required to provide pinpoint citation to the specification (i.e. page and paragraph number) to support any amendments to the claims in all subsequent communication with the examiner. **No new matter will be allowed.**
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brittany M. Martinez whose telephone number is (571) 270-3586. The examiner can normally be reached Monday-Thursday 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMM  
/Vickie Kim/

Supervisory Patent Examiner, Art Unit 4116